

REMARKS

Claims 1-16 are pending in the present application, of which claims 12-16 are new.

Claims 1-2 have been amended. Claim 1 has been amended to recite that the glucose sensors is in a sealed container and claim 2 has been amended to more clearly define the subject matter of the claim. Adequate written descriptive support for those amendments should be apparent from the detailed specification. For example, on page 9, second full paragraph, Applicant discloses that the glucose sensors of the present invention are stored in a sealed state and preferably in a sealed container. Accordingly, it is respectfully submitted that no new matter issues are created by these amendments.

Claims 12-16 are new. It is respectfully submitted that these claims are fully supported by the detailed specification. For example, claim 12 finds support from original claim 1 and the examples on page 19, first full paragraph; page 20, second full paragraph; page 21, last paragraph; page 22 last paragraph including the top of page 23. Claim 13 finds support on page 9, second full paragraph, as discussed for amended claim 1. Claims 14-15 find support at page 9, last paragraph and claim 16 is a rewritten version of original claim 2 but in independent form. In other words, claim 16 incorporates original claim 1 and original claim 2 from the original application. Accordingly, it is respectfully submitted that these new claims do not raise any new matter issues.

Initially, Applicant appreciates the interview granted with the Examiner to discuss the application and prior art. Applicant further appreciates the Examiner's recommendation that amending claim 1 to recite that the sensors contained in a sealed container may render the claims clear of the applied art.

Applicant further appreciates the indication that claims 2, 6 and 9 contain allowable subject matter. Applicant has rewritten original claim 2 in the form of new claim 16. Accordingly, claim 16 should be in condition for allowance.

Claims 1, 3-5, 8 and 10-11 were rejected under 35 USC §103 as being unpatentable over Yoshioka (JP 10-227755) in view of either Lee (WO 95/13535) or Akio (JP 09-262086). Applicant traverses the rejection and respectfully submits that the claims in the application are patentable over the cited references within the meaning of 35 USC §103(a).

Independent claim 1 is directed to a glucose sensor. The sensor comprises an electrically insulating base plate, an electric system, and a reaction layer. The reaction layer contains a PQQ dependent glucose dehydrogenase and gluconic acid or its salt. The glucose sensor is in a sealed container. Dependent claims 1, 3-5, 8, 10-11 and 15 further define aspects of the glucose sensor.

Independent claim 12 is also directed to a glucose sensor comprising an electrically insulating base plate, an electric system, and a reaction layer. The subject matter of this claim further requires that the response of the sensor immediately fabricated is substantially the same as compared to the sensor after being stored in a sealed container for one week at 40°C. Dependent claim 13 recites that the glucose sensor is in a sealed container and dependent claim 14 further define aspects of the glucose sensor.

In contrast, Yoshioka, Lee and Akio do not suggest a glucose sensor having a PQQ dependent glucose dehydrogenase stabilized by gluconic acid or its salt in a sealed container, as recited by independent claim 1. Further, the cited references do not support a finding that one of ordinary skill in the art would have reasonably expected a glucose sensor

having a PQQ dependent glucose dehydrogenase stabilized by gluconic acid or its salt to successfully achieve the subject of independent claim 12.

Indeed, Yoshioka does not even mention a glucose sensor with gluconic acid or salt thereof. While the use of a sample according to the Lee reference may generate gluconic acid in the sensor of Lee there is no recognition or suggestion in these references of a glucose sensor with the gluconic acid in a sealed container, let alone claim 1.

Further, while Akio discloses potassium gluconate or sodium salts thereof can improve the stability of glucose dehydrogenase, the reference does not specify whether the gluconate is effective for PQQ dependent glucose dehydrogenase. It should be appreciated that PQQ base enzymes have different characteristics and response. The molecular weight and characteristics of an enzyme greatly vary depending on a co-enzyme. Moreover, Akio appears to be directed to enzymes that are immobilized by covalent bonding the enzyme to some object. Hence, it is respectfully submitted that one of ordinary skill in the art would not have recognized that the teachings of Akio would apply to PQQ based enzymes and, thus, there is no expectation of success.

Based on the foregoing, Applicant respectfully submits that the combined references do not teach or suggest the claimed subject matter of independent claim 1 and 12 and that one of ordinary skill in the art would not reasonably expect to successfully achieve the subject matter of independent claim 12. Accordingly, reconsideration and allowance of the application are respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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